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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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|-----------------|-------------|----------------------|---------------------|------------------|

10/712,923

11/13/2003

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KYO.P0021

9874

7590

03/24/2005

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EXAMINER

TON, MINH TOAN T

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 03/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/712,923

Applicant(s)

IWASA ET AL.

Examiner

Toan Ton

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 6-9 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2 and 6-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Prior Art (APA hereinafter, Figure 1) in view of Niboshi et al (US 6198215).

APA discloses a reflective LCD device comprising all claimed limitations except the antireflection layer having particular characteristics such as a double layer of a metallic film and a silicon oxynitride film.

Niboshi discloses antireflective film comprising a metallic film having a thickness such as 200 nm (col. 6, line 9, at least meeting/overlapping Applicant's range of smaller than 300nm) and a silicon oxynitride film having a thickness of 40-60 nm (meeting Applicant's range of 400-600 Angstroms), wherein the refractive index ranges from 1.8 to 3.2 (at least meeting/overlapping Applicant's range of 1.7-1.9). Niboshi discloses that such antireflective film achieves advantages such as the intensity of reflected light can be sufficiently suppressed. Therefore, it would have been obvious to one of ordinary skill in the art to employ the antireflective film comprising particular characteristics such as a metallic film with a thickness smaller than 300nm, a silicon oxynitride film having a thickness of 40-60 nm and the refractive index ranges from 1.7-1.9 for achieving advantages such as the intensity of reflected light can be sufficiently suppressed.

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It is noted that overlapping ranges have been held as obvious; and here, Niboshi discloses the antireflective film comprises ranges meeting/overlapping ranges that yield advantages such as the intensity of reflected light can be sufficiently suppressed.

Niboshi discloses several metallic materials such as Mo, Al, Ta, Ni (Ti would appear to be at least functionally-equivalent to one of these metallic materials). Further, it appears that TiN is an alternative/obvious variation (i.e., not patentably distinct) to Ti for the metallic film; and thus, it would have been obvious to one of ordinary skill in the art to employ an antireflective film comprising TiN (alternative/obvious variation, i.e., not patentably distinct, to Ti) having particular/desired thickness so that advantages such as the intensity of reflected light can be sufficiently suppressed.

Response to Arguments

2. Applicant's arguments filed 01/07/05 have been fully considered but they are not persuasive.

Applicant argues that Niboshi discloses an antireflective film comprising a different compound from a claimed compound, and thus yields a different refractive index.

Niboshi discloses an antireflective film comprising a metallic film such as Mo, Al, Ta, Ni (Ti would appear to be at least functionally-equivalent to one of these metallic materials) and SiON, wherein the disclosed compound yields a refractive index of 1.8-3.2 (meeting/overlapping Applicant's range of 1.7-1.9) for achieving advantages such as the intensity of reflected light can be sufficiently suppressed. It is noted that overlapping ranges have been held as at least obvious;

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and here, Niboshi discloses the antireflective film comprises ranges meeting/overlapping ranges that yield advantages such as the intensity of reflected light can be sufficiently suppressed.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan Ton whose telephone number is (571) 272-2303.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

March 16, 2005


TOANTON
PRIMARY EXAMINER